

REMARKS

This communication is filed in response to the Office Action mailed on November 19, 2003, and the Applicants wish to express their appreciation for such a thorough review of the Application by the Examiner. Claims 1, 13-15, 17, 23, 27-29, 40-42, 46-54, and 56 have been amended, no claims are canceled, and no claims are added. As a result, claims 1-58 are now pending in this Application.

Miscellaneous Claim Amendments

Claims 1, 13-15, 17, 23, 40-41, and 56 have been amended to correct typographical errors, and not for reasons related to patentability. Claim 42 has been amended in accordance with more clearly presenting the subject matter taught by the Applicants, as explained below with respect to claim 41, and not for reasons related to patentability. Claims 46 and 57 have been amended to conform to the amendments made to claim 42, and not for reasons related to patentability.

Claim Objections

Objections to claims 29 and 54 have been raised on the basis of an informality, namely, a reference to the "method of Claim 21" when Claim discloses a "system". These claims have now been amended to replace the references to "Claim 21" with references to "Claim 23", and to correct an intervening claim reference; the objection is now moot. Claim 29 has also been amended to add additional linking language with respect to independent claim 23. These amendments do not add new matter to the Application, and have been made to correct typographical errors and errors of omission, not for reasons related to patentability.

§112 Rejections of the Claims

Claims 21-22, 29, 41-42, 46, 54, and 57-58 have been rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. Since a *prima facie* case for non-enablement under § 112, first paragraph, has not been established, and since the specification in the Application does indeed provide enablement commensurate with the scope of claims 21-22, 29, 41-42, 46, 54, and 57-58, this rejection is respectfully traversed.

The specification in an application need only describe the invention to one of ordinary skill in the art. As explained by the Federal Circuit:

Requiring inclusion in the patent of known scientific/technological information would add an imprecise and open-ended criterion to the content of patent specifications, could greatly enlarge the content of patent specifications and unnecessarily increase the cost of preparing and prosecuting patent applications, and could tend to obfuscate rather than highlight the contribution to which the patent is directed. A patent is not a scientific treatise, but a document that presumes a readership skilled in the field of the invention. *Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.* 56 USPQ 2d 1332, 1338 (Fed. Cir. 2000).

As described in MPEP § 2164 et seq., the burden is on the Examiner to establish a *prima facie* case to maintain a rejection of non-enablement with respect to the disclosure of a patent application under 35 U.S.C. § 112, first paragraph. Such a case requires:

1. a rational basis as to
 - a. why the disclosure does not teach, or
 - b. why to doubt the objective truth of the statements in the disclosure that purport to teach;
2. the manner and process of making and using the invention;
3. that correspond in scope to the claimed invention;
4. to one of ordinary skill in the pertinent technology;
5. without undue experimentation; and
6. dealing with subject matter that would not already be known to the skilled person as of the filing date of the application.

“The Examiner must provide evidence ... supporting each of these elements for a rejection under the first paragraph of § 112 to be proper.” See *Patent Prosecution, Practice and Procedure Before The United States Patent Office*, Ira H. Donner, pg. 691, 2002.

¶ With respect to claims 21-22, 29, and 54, the assertion is made that “... the maximum possible field of view when combining two images with no overlap would be 160 (80 + 80) degrees ... therefore ... it is not possible to combine two images and achieve a field of view ‘at least about 180 degrees’ ...”. This statement confuses image capture with image display (as will be explained in further detail below, this is a major difference between what is claimed by the Applicants and what is taught by McCutchen I and/or McCutchen II). It is correct to note that

“the horizontal field of view of the image capture unit . . . is preferably between 1 and 80 degrees, more preferably between 30 and 60 degrees, and 53 degrees in the preferred embodiment” with respect to the Application. The “image portions” of the rejected claims, however, refer to the portion of a scene represented by the combined image, and not that of an individual image capture unit.

The displayed images claimed by the Applicants can be created by a process in which the first and second combined images are created and then enhanced by images obtained from other image capture units on the surface of a sphere, for example. Ultimately, the process yields a pair of combined images that may be displayed as a stereoscopic, panoramic portion of the scene. In figures 5A-5B of the Application, for example, nine separate images have been merged into two independent, combined images. The associated text of the Detailed Description further describes the creation of the resultant image that can be displayed as a portion (e.g., 180 degrees or more) of the scene. See Application, pg. 5, line 20 – pg. 11, line 6. Thus, the specification does indeed support the representation (e.g., display) of 180 degrees and more of a scene using the disclosed apparatus, systems, and methods.

With respect to claims 41, 42-46, and 57-58, the assertion is made that “there is insufficient detail in the applicant’s disclosure to suggest how one would be able to generate a stereoscopic image from a single image.” To fully understand claim 41 (from which claims 42-46 and 57-58 depend, and are therefore rejected), attention is directed to pg. 6 of the Application, which states:

To produce the final panoramic image (68) of the present invention, a first panoramic image (72) and second panoramic image (74) are created. (Figs. 3 and 4A-4B). To create the first panoramic image (72), an image (76), associated with the left image plane (36) of the first image capture unit (26) is combined with an image (78), associated with the left image plane (50) of the second image capture unit (40) and an image (80), associated with the left image plane (64) of the third image capture unit (54). (Figs. 2, 4A and 5A). . . . Once the images (76), (78) and (80), associated with the left image planes (38), (52), (66), and the images (82), (84) and (86), associated with the right image planes (36), (50) and (64) have been

collected from all of the image capture units (26), (40), and (54), the images are transmitted ...” Application pg. 6, lines 3 – 19.

In some embodiments, for example, the “image capture unit” claimed by the Applicants may be the image capture unit (40), and the first and second portions of the image may be the first and second images (78) and (84) referenced in the Application. Thus, the specification does indeed support the reception of portions of an image to provide first and second stereoscopic images
/ using the disclosed apparatus, systems, and methods.

Claims 10, 28, and 47-54 have been rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Because a *prima facie* case of indefiniteness has not been established, the Applicants respectfully traverse this rejection.

It should be noted that “The Examiner bears the burden of showing that a term used in the specification or claims is vague or indefinite to one of skill in the art as defined in the *prima facie* case.” *Patent Prosecution: Practice and Procedure Before the U.S. Patent Office*, Ira H. Donner, pg. 832, 2002. To make out a *prima facie* case of indefiniteness, three elements must be shown:

- 1) interpretation of the claim in light of the specification;
- 2) interpretation of the claim as one of ordinary skill in the art would interpret it; and
- 3) that the limitation(s) in the claim, or the subject matter not in the claim, does not reasonably define the invention. *See Id.*

It is respectfully noted that “the Examiner has the burden of providing a specific rejection of claim terminology and reasons why the Examiner believes the terminology ... would not readily be understood by those of skill in the art. *Id.*”

The Office Action states that “It is uncertain what the term ‘at least partially equirectangular’ in Claim 10 is meant to be ...”. The term “equirectangular” is well known to those of skill in the art, and is used according to its ordinary meaning. One commonly available definition is “a cylindrical projection, made secant by scaling the height to width ratio.” See <http://inside.uidaho.edu/tutorial/gis/engine.asp?term=equirectangular>. An equirectangular map projection, for example, is a special form of a cylindrical equidistant projection where one of the

projection equation components is set to zero. See, for example, Eric W. Weisstein, "Cylindrical Equidistant Projection." from MathWorld--A Wolfram Web Resource, at <http://mathworld.wolfram.com/CylindricalEquidistantProjection.html>. From these references, it is clear that the term "equirectangular" is well known to those of skill in the art, such that one of skill in the art would know how to combine image portions to form an equirectangular combined image. The conversion from rectilinear to equirectangular is described in more detail at pg. 10, lines 20-23 in the Application.

Claims 27 and 28 have been amended to provide a proper antecedent basis. Claims 13 and 47-54 have been amended to correct typographical errors, and to provide a proper antecedent basis. Thus, the rejection of these claims under § 112, second paragraph is moot.

Therefore, since a *prima facie* case for non-enablement under § 112, first paragraph, has not been established; since the specification in the Application does indeed provide enablement commensurate with the scope of claims 21-22, 29, 41-42, 46, 54, and 57-58; since a *prima facie* case of indefiniteness has not been established; and since the language of claims 10, 28, and 47-54 (as amended) is definite in light of the specification, it is respectfully requested that these rejections under 35 USC § 112, first and second paragraphs, be reconsidered and withdrawn.

§102 Rejection of the Claims

Claims 1-15, 18-21, 23-24, 29-32, 34-35, 37, 39, 47-49, 50-54, and 56 have been rejected under 35 USC § 102(b) as being anticipated by McCutchen (U.S. Pat. No. 5,023,725, hereinafter "McCutchen I"). The Applicants do not admit that McCutchen I is prior art and reserve the right to swear behind this reference at a later date. In addition, because the Applicants assert that the Office has not shown that McCutchen I discloses the identical invention as claimed, the Applicants respectfully traverse this rejection of the claims.

Anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), *cert. denied*, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American*

Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added). The following paragraphs will be directed to independent claims 1, 19, 23, and 30, as well as the claims that depend from them.

First, it is respectfully noted that McCutchen I does not provide “means for combining at least a first portion of a first image captured with said first image capture device with a portion of a second image captured with said second image capture device, to produce a first combined image”, as claimed by the Applicants in claims 1 and 19, and in similar language with respect to claims 23 and 30. McCutchen I also does not provide “means for combining at least a second portion of said first image with at least a portion of a third image captured with said third image capture device to produce a second combined image” as claimed by the Applicants in independent claims 1 and 19, and in similar language for independent claims 23 and 30. Finally, McCutchen I also does not teach the display of combined images “to provide a stereoscopic image” as claimed by the Applicants in claims 23 and 30. In short, McCutchen I does not disclose means for generating the two distinct combined images disclosed by the Applicants. Instead, overlap is used to improve the quality of a displayed panoramic image. The difference lies in the terms “combine” and “display”, which is highlighted by the language of claims 23 and 30. McCutchen I is only able to provide the display of an image, while the Applicants teach the combination of images, as well as their display.

McCutchen I discloses a compound camera with multiple image capture devices, and a compound projector that can display the captured images through multiple image projectors. Contrary to the assertions made in the Office Action, McCutchen I relies on a side-by-side display of separate images to provide a panoramic image, not using portions of captured images to create a combined image of the type defined in the Application (it is the combined images claimed by the Applicants that may then be displayed to provide a stereoscopic image).

The use of overlap does not alter this fact. McCutchen I does disclose an arrangement of three image capture devices that overlap one another. However, McCutchen I does not combine

image portions to produce individual combined images, as claimed. Overlapping is simply used to increase the resolution of the image areas. See McCutcheon I, Cols. 21-22, and FIGs. 22-26.

Perhaps the essential difference in what McCutcheon I provides (and which falls short of what is needed to anticipate the claims of the Application) may be demonstrated by referring to the text of McCutchen I at Col. 20, lines 65-68, which states "With each lens being used to create overlapping images ... such a camera would therefore be capable of ... nearly omnidirectional stereoscopic photography." The key word is "nearly".

With respect to McCutchen's device, two adjacent camera views may be displayed as a stereo scene if the pair of cameras acts as a stereo pair. However, no method is disclosed to seamlessly unite these limited field-of-view stereo "pockets" created by various pairs of cameras. That is, there is no way to transition from the stereo view provided by one camera pair to that provided by another (hence the reference to "nearly" omnidirectional stereoscopic photography). To achieve a panoramic stereoscopic display (let alone a nearly omnidirectional one), image portions must be extracted and then combined into two overall (panoramic, omnidirectional, etc.) combined images (e.g., left eye/right eye) as claimed by the Applicants. The device of McCutchen I does not do this.

Second, the overlap described by McCutchen I is not equivalent to the use of image portions claimed by the Applicants. (e.g., in Claim 6, the portion of an image used to make a combined image is related to the original image size from which it is extracted; in McCutchen, overlap is something which occurs between two separate images). This is a major difference.

Assuming *arguendo* that the image portions claimed by the Applicants somehow equate to the overlap of McCutchen I, it is easily demonstrated that this premise leads to completely different outcomes. For example, in many embodiments of the claimed invention, image overlap may be about 40-60%. As a matter of contrast, the pentagonal image overlap of McCutchen I (as determined from Figure 24) is not 33%, as asserted in the Office Action. McCutchen I, Col. 22, lines 1-3 states that the circle enclosing the three-pentagonal orientation pictured in Figure 24 has a height equal to the vertical height of the video raster scan. To fit within a standard rectilinear image, the aspect ratio closest to a square (which would leave the smallest video area outside of the specified pentagons) is 1:1.33. Using these dimensions, along with the dimensions of Figure 24, each pentagon only comprises approximately 13% of the total captured image area. Thus,

the overlapping image area in McCutcheon I is in reality considerably smaller than 20%, unlike the portions claimed by the Applicants. This minimal overlap could not possibly be used to create a true panoramic, stereoscopic image.

Third, McCutchen I never uses the term “rectilinear”, as claimed by the Applicants. McCutchen I operates to capture non-rectilinear image data using conventional image sensors that have a rectangular design. The rectangular nature of the sensors is completely independent of the data captured.

Fourth, feathering, as claimed by the Applicants, refers to a process whereby the visibility of pixels in combined image overlap areas is degraded. McCutchen I has no need for such feathering, since no combined image areas are created. Further, McCutchen I speaks of reducing brightness (i.e., reducing resolution away from the center of the image) during display to overcome problems created by multiple overlapping displayed images so that human vision is more accurately represented. The claimed embodiments do not have this problem, and there is no need for such corrective measures since image portions are seamlessly combined prior to display.

Fifth, the masking processor of McCutchen I does not operate to combine images. As explained by McCutchen I, at Col. 15, lines 24-42 and Col. 23, lines 5-67, the masking process is part of the display, and not of acquisition. Each displayed image is cropped according to templates provided to the masking processor. Thus, masking is not part of image capture, nor of an image capture device. The captured imagery of McCutchen is never combined to provide a unified panoramic image; pentagons which result from masking or cropping are still intact, not combined, versions of the original acquired image. The displays of McCutchen I merely give the appearance of combination because individual segments are projected onto an external screen in an overlapping manner. It should also be noted that the McCutchen I processor (107) is used exclusively for exposure and focus control, not the combination of images.

Therefore, since McCutchen I does not teach the combination of images as claimed by the Applicants in independent claims 1, 19, 23, and 30, as well as the claims that depend from them, what is disclosed by McCutchen I is not identical to the subject matter of the embodiments claimed, and the rejection of claims 1-15, 18-21, 23-24, 29-32, 34-35, 37, 39, 47-49, 50-54, and 56 under § 102 is improper.

If the Examiner is not firmly convinced of the major differences between what is claimed by the Applicants and McCutchen I, the Applicants respectfully request an interview with the Examiner. Reconsideration and allowance are respectfully requested.

§103 Rejection of the Claims

Claims 25-26, 28, and 33 have been rejected under 35 USC § 103(a) as being unpatentable over McCutchen I in view of McCutchen (U.S. Pat. No. 6,141,034, hereinafter "McCutchen II"). Claim 38 has been rejected under 35 USC § 103(a) as being unpatentable over McCutchen I in view of Chen ("Landscape Generation: A Changing Perspective," excerpted from *ESD: The Electronic System Design Magazine*, pgs. 44-48, February 1988, hereinafter "Chen"). Claims 16-17, 27, and 40 have been rejected under 35 USC § 103(a) as being unpatentable over McCutchen I, in view of McCutchen II, and in further view of Uyttendaele (U.S. Pat. No. 6,559,846, hereinafter "Uyttendaele"). The Applicants do not admit that McCutchen I, McCutchen II, Chen, or Uyttendaele are prior art, and reserve the right to swear behind these references at a later date. Further, since a *prima facie* case of nonobviousness has not been established in each case, as required by M.P.E.P. § 2142, the Applicants respectfully traverse these rejections.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art that would lead an individual to combine the relevant teaching of the references. *Id.* The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

An invention can be obvious even though the suggestion to combine prior art teachings is not found in a specific reference. *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d (BNA) 1443 (Fed. Cir. 1992). However, while it is not necessary that the cited references or prior art specifically suggest making the combination, there must be some teaching somewhere which provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem which the claimed invention addresses. One of ordinary skill in the art will be presumed to know of any such teaching. (See, e.g., *In re Nilssen*, 851 F.2d 1401, 1403, 7 U.S.P.Q.2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599 F.2d 1032, 1037, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)). However, the level of skill is not that of the person who is an innovator but rather that of the person who follows the conventional wisdom in the art. *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 474, 227 U.S.P.Q. 293, 298 (Fed. Cir. 1985). The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which notes that the motivation must be supported by evidence in the record.

No proper *prima facie* case of obviousness has been established because (1) combining the references does not teach all of the limitations set forth in the claims, (2) there is no motivation to combine the references, and (3) combining the references provides no reasonable expectation of success. Each of these points will be explained in detail, as follows.

The Combination of References Does Not Teach All Limitations: First, as noted previously, McCutchen I does not teach the construction or use of combined images as claimed by the Applicants. Neither do McCutchen II, Chen, or Uyttendaele. As noted in the Office Action, McCutchen I and II use multiple images to achieve greater resolution. However, the Applicants use multiple images to create separate combined images, which are not disclosed by McCutchen I and II.

Second, the image capture units of the Applicants are oriented differently with respect to the equatorial axis line of a sphere than those of McCutchen. The orientation of the Applicants' units provides for a nearly infinite expansion and contraction of the camera design, while maintaining stereoscopic properties. As the number of units increases, the field of view that each unit must capture decreases, reducing hardware requirements and permitting the use of

commercially available rectilinear lenses. McCutchen I does not use rectilinear lenses (which by definition do not exceed a 60 degree field of view); McCutchen I uses electro-optical lenses that cover an approximately 140 degree field of view, introducing large amounts of image distortion avoided by using embodiments claimed by the Applicants.

Third, contrary to assertions in the Office Action, the number of image capture units may be dictated by their geometric placement relative to each other, the size of the sphere on which they are placed, and the associated field of view with respect to the camera optics. Depending on the limits of the optics, the number of image capture units may become arbitrary above a certain number.

Fourth, the referenced text in McCutchen II (i.e., Col. 36, lines 20-26) refers to a non-stereo device with blended display overlap that is used to merge adjacent image sections into a single overall image. The overlap claimed by the Applicants has nothing to do with merging images into a single overall image. Rather, the Applicants' claimed overlap is used to produce two distinct combined panoramic images for display to the left and right eyes of a human. Thus, the amount of overlap is not an arbitrary design parameter; certain amounts of overlap with respect to the Applicant's apparatus and methods would result in a non-functional end product.

Fifth, the Office Action relies on capturing a monoscopic panoramic image, rotating the camera, and then capturing a second monoscopic panoramic image (as taught by McCutchen II, at Col. 51, lines 43-55) to create a stereoscopic image. While it is possible that two such panoramic images could be combined to provide a stereo pair, the necessary motion of the camera eliminates the possibility of capturing both images at substantially the same time, as provided by the apparatus, systems, and methods of the Applicants. Without substantially simultaneous capture of the stereo image pair, moving objects in the scene will be distorted. Again, the difference between combining images prior to display (as claimed by the Applicants), and mere display of the images (as provided by McCutchen I and II) is highlighted.

Sixth, Chen teaches the display of sequenced images determined by a prediction algorithm to follow a pilot's viewpoint. Chen, Col. 1, para. 2. However, as is the case with McCutchen I and II, Chen does not teach the combination of images to provide a stereoscopic pair that can be used to display a stereoscopic image, or a stereoscopic, panoramic image, as claimed by the Applicants.

Seventh, Uyttendaele teaches the production of sequenced, textured images using decoded panoramic video data mapped onto a preselected three-dimensional environmental model. However, as is the case with McCutchen I and II, Uyttendaele does not teach the combination of images to provide a stereoscopic pair that can be used to display a stereoscopic image, or a stereoscopic, panoramic image, as claimed by the Applicants.

No Motivation to Combine References: While the assertion is repeatedly made that it would be obvious to combine McCutchen I and McCutchen II to provide the missing elements and “for greater resolution”, it has been noted that the purpose of additional images described in the Application is not to provide the increased resolution promoted by McCutchen I, but to create separate, combined images. This claimed result is not provided by any combination of McCutchen I, McCutchen II, Chen, or Uyttendaele.

In addition, McCutchen I, McCutchen II, Chen and Uyttendaele teach away from such a combination. McCutchen I notes that existing “individual projectors” are unable to effect the type of display sought. See McCutchen I, Col. 3, lines 55-61. On the other hand, Uyttendaele disclaims the use of multiple-camera projection systems for the generation of panoramic video, since they have “an expensive stitching stage and parallax artifacts”. See Uyttendaele, Col. 1, line 49 – Col. 2, line 3. A standard computer monitor, video projector, or television is used to display Uyttendaele’s result. Uyttendaele, Col. 9, lines 20-25. Thus, it would defeat the purpose of Uyttendaele to attempt combination with the multiple projector system of McCutchen I and/or II.

McCutchen II refers to problems raised by the system of Chen, including the “extensive digital processing of the images ... required to make them suitable for display.” See McCutchen II, Col. 2, lines 16-32. In fact, McCutchen specifically states in his system “no processing of the image other than cropping is required for display.” McCutchen II, Col. 2, lines 35-36. Thus, it would be antithetical to the purposes of McCutchen II to propose combination with the system of Chen.

The test for obviousness under § 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985). References must be considered in their entirety, including

parts that teach away from the claims. See MPEP § 2141.02. The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01.

No Reasonable Expectation of Success: Modifying McCutchen I and/or McCutchen II to include the display of sequenced images determined by a prediction algorithm of Chen and/or to include the production of sequenced, textured images using decoded panoramic video data mapped onto a preselected three-dimensional environmental model, as taught by Uyttendaele, would not render the apparatus, systems, or methods claimed by the Applicants. First, none of the cited art teaches combining images as defined in the Application. Second, the use of a single projector or display taught by Uyttendaele would render McCutchen I and II inoperable. Further, modifying McCutchen I and/or McCutchen II to include the processors of Chen would be unacceptable, according to the teachings of McCutchen I and II. Thus, the suggested modifications would not provide a reasonable expectation of success. In fact, such a combination would render a less than desirable result, including a completely inoperative one in many cases.

Therefore, since there is no evidence in the record to support disclosure by McCutchen I, McCutchen II, Chen, or Uyttendaele of combined images, as claimed by the Applicants, since there is no motivation to combine the references to supply the missing elements, and since no reasonable expectation of success arises, a *prima facie* case of obviousness has not been established with respect to independent claims 1, 23, and 30. This conclusion applies with even greater force respecting dependent claims 16-17, 25-28, 33, 38, and 40, since any claim depending from a nonobvious independent claim is also nonobvious. See M.P.E.P. § 2143.03. It is therefore respectfully requested that the rejections of claims 16-17, 25-28, 33, 38, and 40 under 35 U.S.C. § 103 be reconsidered and withdrawn.

CONCLUSION

The Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicants' attorney, Mark Muller, at (210) 308-5677 to facilitate prosecution of this Application and/or to arrange an interview with the Applicants. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18th day of February, 2004.

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